Quarterly
Technical Project Status Report
1st Quarter - 2007

Enhancing Cross-Cutting Decision Support Systems with NASA's Remote Sensing Data

Enhancement of a Prototype Crosscutting Multi-National Decision Support System in Mesoamerica

Grant Number: NNG05GF04G

Submitted to:
Internal

Enhancement of a Prototype Crosscutting Multi-National Decision Support System in MesoAmerica

Project Overview

The primary objective of this project is for IAGT to enhance the SERVIR decision support system, which is currently under development by NASA, with advanced visualization and mapping tools to enable utilization of NASA and commercial remote sensing technology and data. SERVIR will assist the seven nations of Central America and Mexico.

Current Project Status

Efforts for the first quarter of 2007 included many key enhancements to SERVIR Viz, support for a training workshop held in Panama, and wrap-up work after the highly-successful SERVIR Summit.

Recent Accomplishments

- Abstract written for the **5th International Symposium on the Digital Earth** (ISDE5) for entry into the Digital Earth Grand Challenge.
- Abstract and paper written, submitted and accepted for participation in the **32nd International Symposium on Remote Sensing of Environment,** June 2007, Costa Rica.
- Released a new version of SERVIR Viz (SERVIR Viz 2.1). This version is based on the latest source code for NASA World Wind (version 1.4). It is available for download at: **http://servir.nsstc.nasa.gov/visualizations/servir_viz.html.** This latest version provides all the new functionality of World Wind 1.4, as well as some SERVIR specific improvements, and bug fixes. The release notes for this version can be found at: http://servir.nasa.cathalac.org/visualizations/servir_viz_nuevo.html. Some specific enhancements are:
  - Rewrite of the auto-update feature in SERVIR Viz. This increased efficiency by giving each update file a specific id, and date.
  - Update of the SERVIR Viz WMS functionality, so that users may now order the WMS layers using a new dialog box.
  - Minor bugs fixed related to accessing the GEOSS data through the toolbar shortcut.
  - Additional Spanish translations were added, and unnecessary tools that were installed with WorldWind 1.4 were removed.
  - Updated the .exe installer to correctly install over an existing installation, as well as being able to run simultaneously with NASA World Wind.
  - Update of the GEOSS tools with new model input.
  - Update of elevation data to correspond with WorldWind updates.
  - Update of the Microsoft Virtual Earth Plugin.

- Many new subtasks were created in the first quarter, as a result of discussion with SERVIR partners, Mr. Irwin, and other collaborators. It is anticipated that most of these new tasks will be initiated under the CCDSS grant, with follow-on support provided through the Integrated Applications grant. Briefly, some of the new DST development efforts include:
  - Development of a tool that works in ESRI ArcGIS to automatically download, convert and symbolize data from the Coral Reef Watch project.
  - Creation of a series of thematic maps for distribution as a Mesoamerican Atlas. Themes include watersheds, vulnerable areas, protected regions, etc.
    - Exploration of creating a new flood alert tool and/or system that could be used in conjunction with the SERVIR portal to increase awareness of flooding potential and aid in response.

- IAGT provided resources in support of the SERVIR training workshop held at the CATHALAC offices in Panama, February 25th through March 2nd, 2007.
  - Created a complete set of training materials to support SERVIR Viz training, both in English and Spanish.
  - Sent two IAGT staff members to conduct the SERVIR Viz training and assist in other workshop activities.
  - Provided specific technical support as per user requests.

Outstanding Issues

- Currently searching for a replacement for the IAGT-funded GIS Programmer position at CATHALAC (formerly Milton Solano's position). CATHALAC is leading the search with IAGT participating as requested.

Near-term Goals

- Continue developing SERVIR Viz as per user requests and SERVIR team requirements.
- Review costs for obtaining high resolution imagery for select regions in Mesoamerica and, if feasible, create an implementation plan for inclusion in SERVIR Viz.
- Participate in the aforementioned conferences.
- Write an article highlighting SERVIR Viz applicability and submit to various scientific journals for publication.
- Work on mini-plan tasks as described above.